

CLAIMS

What is Claimed is:

1. An electrode ring suitable for providing electrostatic assistance
5 to the high-speed rotary coating device comprising a high-speed rotary
bell for the application of spray coatings and having electrode fingers
connected thereto comprising electrode tips, wherein the electrode
ring is constructed so as to be capable of performing rotational
movements about the axis of rotation of the rotary bell directed
10 through the center of the circle of the electrode ring.
2. The electrode ring of claim 1, wherein the electrode ring is
connectable to the housing of the rotary bell of the high-speed rotary
coating device with a fastening device by means of a bearing
15 connection.
3. The electrode ring of claim 2, wherein the fastening device may
be connected in firmly fixed manner with the housing of the high-speed
rotary bell such that the electrode ring surrounds the high-speed rotary
20 bell located in the center thereof in annular manner, wherein the high-
speed rotary bell and electrode fingers of the electrode ring point in
the same direction.
4. The electrode ring of claim 1, wherein the electrode ring
25 comprises a sliding contact for the purpose of electrical contacting of
the electrode tips.
5. An electrostatic coating device comprising a high-speed rotary
bell having a central axis of rotation and having an electrode ring
30 positioned around the central axis of the bell and connected to the
housing of the bell with a fastening device and capable of performing
rotational movements around the central axis of rotation of the bell and

said electrode ring having electrode fingers attached thereto comprising electrode tips.

6. A process for coating substrates by means of electrostatically
5 assisted high-speed rotary application of spray coatings using a high-speed rotary coating device comprising a high-speed rotary bell, wherein the coatings are selected from the group consisting of powder coatings and liquid coatings, wherein an electrode ring is rotatably
10 positioned around the high-speed rotary bell and used for external electrostatic charging of the spray mist and performs rotational movements about the common axis of rotation with the high-speed rotary bell.

7. The process of claim 6, wherein the rotational movements of the
15 electrode ring comprise rotational movements selected from the group consisting of rotation at 10 to 100 revolutions per minute, oscillating rotational movement with a frequency of alternation of 0.5 to 2 Hz and sequences of such rotations and oscillating rotational movements.

20 8. The process of claim 6, wherein the substrates comprise industrially mass produced goods.

9. Substrates spray coated by a process of claim 6.